

SLOW RELEASE FERTILISERS

CRF COSTS PER SQ YD COMPARABLE WITH CONVENTIONAL FERTILISER

CONTROLLED release fertiliser may seem expensive compared with ordinary granular products. However, recommended application rates are low and just one spring dressing of crf lasts a whole season. Comparing the costs, Mr Richard Flower, head greenkeeper at Mendip Golf Club near Bath calculates Osmocote N crf to be no more expensive than conventional fertiliser. It also gives steady turf growth without flushes and reduces labour input.

A half hundred weight bag of ordinary 17:0:9 fertiliser costs Mr Flower £7.00 and at 1oz/sq yd covers 800 sq yd. His total tee area is about 5,400 sq yds. To keep tee turf looking good, it often requires repeated dressings during the summer. "I dress tees and surrounds three times, at 6 week intervals with 1oz/sq yd 12:0:9 fertiliser" said Mr Flower. He therefore covers 16,200 sq yds, at a cost of 2.4p/sq yd, plus 4 hours labour per application.

Osmocote N crf was applied on trial tees at 3/4 oz/sq yd last March using a cyclone spreader. The tees were not irrigated. "It gave good grass cover all year. The turf didn't flush, then wear away and start looking hungry, which happens with the ordinary feed" he observed.

To feed the tees with Osmocote N for the season needs one dressing at 3/4 oz/sq yd. At this rate, a 25kg bag of Osmocote N crf from Sierra UK Ltd, Nottingham,



covers 1180 sq yds. At £40 per bag this equates to 3.3p/sq yd, but he saves over eight hours' labour cost and management time. "On comparison there's hardly any difference in price between using crf and my ordinary fertiliser" said Mr Flower. "The advantage is you only have to apply the crf once - before things get really busy - and the turf grows steadily all year."

Osmocote N granules contain NPR 39:0:0, in organic resin coating, safe for users and the environment. The rate of nitrogen release depends on soil temperature. At average temperature 16°C one application lasts 7 months. Release rate mirrors grass growth therefore reducing the chance of leaching and granules are small enough to avoid being picked up by

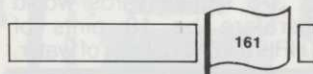
mowers. Costwise crf is comparable with conventional fertilisers and a labour-saving means of keeping tee turf green and strong all season.

applications.

Flo-Gro liquids are compound fluid fertilisers formulated as totally clear solutions without any sediment. To ensure accurate and consistent quality "state-of-the-art" computerised auto analysis has been used to guarantee the nutritional content of each product. Some of the Flo-Gro products contain "Didin Fluid" the slow release nitrogen inhibitor which phases the amount of nitrogen available to the plant.

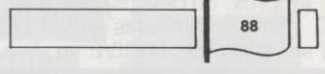
Flo-Gro liquid fertilisers eliminate unsightly powder and granule residues and mower "pick-up" on fine turf. Formulated as liquids Flo-Gro ensures more accurate and simple measuring and application can be combined with pesticide and other liquid turf care products.

Flo-Gro products will be available for use on turf and each is packed in 20 litre plastic containers, each product is colour coded to ensure easy recognition.



NEW SOLUTIONS FOR GROWING PROBLEMS

THE Farmura Flo-Gro range represents a completely new and revolutionary approach to turf nutrition. Specially formulated for use on turf following a successful national commercial users trial programme Flo Gro liquid fertilisers offer the professional Greenkeeper, Groundsman and Landscaper an advance range of products providing a safe and simple alternative to conventional fertiliser



THRIVE

THRIVE 100 per cent Organic Plant Food and Soil Conditioner, is the direct result of pollution control systems developed for farmers to use in containing and converting farm wastes into useful fertilisers. By containing these toxic slurries, seepage into watercourses with consequent environmental damage is prevented.

The process is anaerobic digestion of raw cow slurry, in large underground tanks. During this digestion period, weed

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Farmura
Environmental

IN 1990

FARMURA WILL MAKE THE NEW 'FLO-GRO' LIQUID FERTILIZERS AVAILABLE TO THE TURF INDUSTRY

FLO GRO
LIQUID FERTILISER

● Maximises nutrient uptake at soil and foliar level - reduces soil build up of excess nutrients

● Encourages more even application through spraying, providing even grass growth response

● Stimulates a healthy green colour without undesirable flushes of growth

● Eliminates unsightly powder and granular residues and mower 'pick-up' on fine turf

20 LITRE plastic drum

RESULT: GREAT NEWS FOR GREENKEEPERS. BAD NEWS FOR COMPETITORS

STONE HILL, EGERTON, ASHFORD, KENT, TN27 9DU. TELEPHONE (023 376) 241/581

GREENKEEPING
MANAGEMENT

SLOW RELEASE FERTILISERS

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seeds, toxins and disease pathogens are destroyed, but all the nutrients of the original manure are retained.

These nutrients are in both ammoniacal and slow release organic forms, which gives a most natural response, without a swift flush of growth, and then a fall back. THRIVE liquid plant food does, however, give a strong and steady growth, offering quite remarkable results.

Some of the benefits when used on turf, are: Much improved soil structure. Improved root development. Greater drought resistance. Increased micro organism activity. Reduced dependence on chemical fertilisers. THRIVE liquids help reduce environmental pollution.

Application rates for grasslands are as follows, but should be used as a guide only. For instance, sandy soils will need somewhat higher amounts than medium or clay soils.

One 25 litre drum of THRIVE diluted into 132 litres of water (approx. 30 gallons) per acre.

Smaller amounts would be six pints of THRIVE in five



gallons of water to feed about 125 square yards. A golf green of 375 square yards would therefore be 18 pints of THRIVE in 15 gallons of water.

Three applications a year should be quite sufficient for very healthy grass growth. The increased micro organism activity will also help in the control of thatch. THRIVE liquid is intended to be used as a coarse spray, and fine filters should be removed from equipment before use. Clean out with clear water afterwards.

TYPICAL ANALYSIS OF THRIVE LIQUID PLANT FOOD

- (n) Nitrogen 4.32 per cent.
 - (p) Phosphorous .96 per cent.
 - (k) Potassium 3.2 per cent.
 - Calcium 1.5 per cent.
 - Magnesium .43 per cent.
 - Sodium .66 per cent.
 - Manganese .027 per cent.
 - + other trace elements.
- Heavy metal contents are very low.
- Copper 139 parts per million.
 - Lead 11 parts per million.
 - Zinc 1154 parts per million.

Note: Because THRIVE is a natural product, it is not possible to guarantee this analysis to be absolutely accurate from batch to batch. However, each batch produced will be reasonably close to make major difference to the results obtained.

ICI LONGLIFE FERTILIZER

WHEN ICI Professional Products as one of the worlds largest companies introduces a new range of fertilizers to the sports, amenity and landscape market, there is a great deal of attention given to their activities. So it was when in 1988 ICI Professional Products acquired the marketing rights for the Longlife range of turf fertilizers.

As the needs of the grass plant changes in light of new cultivars, management practices and increased wear and tear on the turf, fertilizer suppliers must adapt the analysis of their fertilizers to suit these changes.

ICI technical staff reviewed current research and soil analysis data from a wide range of turf situations, furthermore the view of experienced greenkeepers and groundsmen were also sought. The result of these investigations has enabled ICI to bring together a range of products to suit all these different needs. In particular ICI identified early on the need for a zero phosphate fertilizer and this is why Finegreen NK is a key part of their fine turf range.

The Longlife range now consists of four products for fine turf and four for sports fields. The tables show clearly the range available. All the products contain in addition to the nutrients shown, a combination of trace elements derived from seaweed which provides a range of organic nutrients.

"One of the major reasons why the Longlife range has made such an impact in the UK market is the incorporation of the unique nitrification inhibitor Didin" sates Patrick Goldsworthy, ICI's Products Technical Manager.

The grass plant can absorb nitrogen in both the nitrate and ammonium forms; but the ammonium form, which is less prone to leaching, is used more slowly by the grass plant resulting in a reduced flush and a longer period of growth."

"By including the nitrification inhibitor 'Didin' in their fertilizers ICI ensure that the majority of nitrogen present in the rooting zone is in the ammonium form. This results in a prolonged feed from one application and a more efficient

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THRIVE LIQUID

PLANT FOOD AND SOIL CONDITIONER IS A 100% NATURAL FERTILISER WITHOUT ANY CHEMICAL ADDITIVES WHATSOEVER

It can be sprayed onto grassland in cold or hot, wet or dry conditions. Because it is a fully processed, natural product, it will not scorch, even if used undiluted. The nutrients are in both ammoniacal and slow release organic forms, giving a gentle and steady response, without a swift flush of growth.

SOME OF THE BENEFITS WHEN USED ON TURF ARE:

- Much improved soil structure ● Improved root development
- Greater drought resistance ● Increased micro organism activity ● Reduced dependence on chemical fertilisers ● Thrive liquids genuinely help to reduce environmental pollution.

For further information please contact our sales office at:

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**Telephone: (0536) 411177
Telex: 347202. Fax: (0536) 411736**

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FERTILIZER FOR FINE TURF

Longlife Spring & Summer
14.3.7 + Didin + Mg + seaweed extract

Longlife Finegreen NK
15.0.5 + Didin + Mg + seaweed extract

Longlife Nitrogen with Iron
8.0.0 + 2.5Fe + seaweed extract

Longlife Autumn Feed
5.5.15 + Mg + Fe + seaweed extract

FERTILIZER FOR SPORTS FIELDS

Longlife Spring & Summer
11.6.9 + Didin + Mg + seaweed extract

Longlife Autumn Feed
10.10.15 + Didin + seaweed extract

Longlife Nitrogen
25.0.0 + Didin + Mg + seaweed extract

Longlife Plus
14.3.7 + Didin + Mg + seaweed extract
= 2,4-D/didcamba

use of nitrogen due to less leaching."

"We realised at an early stage the importance of slowing down the release of nitrogen so that the plant could

utilise this valuable nutrient at the time it was needed. We understood the importance of slowing down the leaching process, reducing the release of nitrates into the soil and water

profile. Both IBDU and Didin were available but we considered that Didin offered many advantages over IBDU.

Reasons for deciding in the favour were many.

1. Didin activity is temperature dependant therefore as the temperature rises and the turf is growing more rapidly additional nitrogen becomes available under these conditions.

2. Didin offers the advantage of releasing nitrogen over a time scale which parallels the growth patterns of the plant. Greenkeepers and groundsmen can retain a higher level of nutritional control over a period of time.

3. Didin is economically priced which allows Longlife to be extremely competitive against IBDU slow release products and conventional fertilizers.

4. The action of Didin is specific to only one bacteria, Nitrosomonas and therefore will not cause thatch build-up by delaying the natural decomposition of organic matter.

5. Finally, and particularly relevant in these environmentally sensitive times 'Didin' significantly reduces nitrate leaching.

Didin is now well into a long term trials programme at the Sports Turf Research Institute and preliminary results have shown significant differences with comparable products included in the trials.

"Another major feature of Longlife fertilizers is in its physical formulation," comments Steve Hall, ICI's Product Manager for Longlife fertilizers. "The Longlife granule is a compound fertilizers have the nitrification stabilizer as well as the other nutrients in each granule.

Blends, however will cause "speckling" due to the variation of nutrients in each granule and the different release rates of the various nitrogen sources.

The granule itself is of high quality with excellent spreadability. Both the size of the granule and its quick breakdown will ensure minimal mower pick-up.

A comment expressed by many greenkeepers, groundsmen as well as the trade is "why so cheap when compared with other slow release products?"

The reason says Steve Hall is simple.

"The production costs are lower. As ICI is a major fertilizer manufacturer and the manufacture of Longlife is in the UK this saving can be passed onto the end-user.

ICI offer a free soil analysis service to all Longlife customers. This service facility conducted at ICI's Jealotts Hill research station, the largest of its kind in Europe, tests 80-90,000 soil samples each year covering agriculture, horticulture and the turf industry. Soil analysis is very important to the greenkeeper and groundsmen as it enable a high level of management control to be undertaken. This is particularly highlighted in sand based greens where phosphate and potash levels need continual monitoring."

THE NITRIFICATION PROCESS

